

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method for producing a porous film wherein a porous film of a poly(vinylidene fluoride) based resin is prepared by dissolving the poly(vinylidene fluoride) based resin in a poor solvent through heating to form a liquid raw material for a film, and then cooling the liquid raw material at temperature of 170°C or above to bring about a phase separation, characterized in that an organized clay being organized by a hydrophilic compound is dispersed in said liquid raw material for a film in an amount of 1 to 25 parts by weight relative to 100 parts by weight of the poly(vinylidene fluoride) based resin.

2. (Original) The method for producing a porous film according to claim 1, wherein the temperature of said liquid raw material for a film before cooling is 170°C or above and lower than the thermal decomposition temperature of the poly(vinylidene fluoride) based resin.

3. (Withdrawn) A porous film comprising a poly(vinylidene fluoride) based resin and an organized clay being organized by a hydrophilic compound, the organized clay being dispersed therein in an amount of 1 to 25 parts by weight relative to 100 parts by weight of the poly(vinylidene fluoride) based resin, wherein a microstructure is formed by a thermally induced phase separation method of cooling the liquid raw material at temperature of 170°C or above to bring about a phase separation, said microstructure having an irregularly shaped resin phase continuous in a three-dimensional manner with a network structure and having irregularly shaped pore spaces therebetween.

4. (Withdrawn) The porous film according to claim 3, wherein said organized clay is a clay prepared by organizing a layered inorganic silicate with an alkylene oxide compound.

5. (Previously Presented) The method for producing a porous film according to claim 1, wherein said organized clay is a clay prepared by organizing a layered inorganic silicate with an alkylene oxide compound.

6. (Withdrawn) The porous film according to claim 3, wherein the temperature of said liquid raw material for a film before cooling is 170°C or above and lower than the thermal decomposition temperature of the poly(vinylidene fluoride) based resin.

7. (Currently Amended) The method for producing a porous film according to claim 1, wherein said porous film comprises a microstructure having an ~~irregularly~~ non-uniformly shaped resin phase continuous in a three-dimensional manner with a network structure and having irregularly shaped pore spaces therebetween.

8. (Previously Presented) The method for producing a porous film according to claim 1, wherein said organized clay is a clay prepared by organizing a layered inorganic silicate with a hydrophilic compound, wherein said hydrophilic compound is an organic onium ion.

9. (Previously Presented) The method for producing a porous film according to claim 1, wherein said poor solvent comprises a phthalic acid ester.

10. (Previously Presented) The method for producing a porous film according to claim 1, wherein said porous film has an average pore diameter of 0.1 to 8 μm .

11. (Withdrawn) The porous film according to claim 3, wherein said porous film has an average pore diameter of 0.1 to 8 μm .

12. (Previously Presented) The method for producing a porous film according to claim 1, wherein said porous film has a porosity of 50 to 90%.

13. (Withdrawn) The porous film according to claim 3, wherein said porous film has a porosity of 50 to 90%.

14. (New) The method for producing a porous film according to claim 1, wherein the organized clay is in the form of grains having a size of 0.01 to 0.3 μm .

Application No.: 10/587,786
371(c) Date: July 28, 2006

15. (New) The method for producing a porous film according to claim 1, wherein the formation of spherical crystal structures of the poly(vinylidene fluoride) in the film is suppressed relative to a film formed without the use of the organized clay.